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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,317	11/26/2003	William G. Howard	P11515.00	9480

27581 7590 03/20/2007

MEDTRONIC, INC.
710 MEDTRONIC PARK
MINNEAPOLIS, MN 55432-9924

EXAMINER	
ALEJANDRO, RAYMOND	
ART UNIT	PAPER NUMBER
1745	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/723,317	HOWARD ET AL.	
	Examiner	Art Unit	
	Raymond Alejandro	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) *17-28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This office correspondence is being offered in response to applicant's communication dated 02/23/07. Applicant has overcome only objections. However, neither the 35 USC 112 rejection nor 35 USC 102 rejections have been overcome. Refer to the abovementioned amendment for more details concerning applicant's rebuttal arguments. Thus, the present claims are finally rejected over the previously stated grounds of rejection as shown hereunder and for the reasons of record:

Election/Restrictions

1. This application contains claims 17-28 drawn to an invention nonelected with traverse in Paper No. 10/10/06. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 1, as now amended, recites the limitation "a feedthrough pin" in line 7 and line 9 (two occurrences). There is insufficient antecedent basis for this limitation in the claim. *Since*

claim 1 recites two times that limitation, it is immediately unclear whether applicant intends to recite the same "feedthrough pin" or two different feedthrough pins (i.e. a first and a second feedthrough pins). Further clarification is require.

5. Claim 3 **still** recites the limitation "the weld bracket" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Haas et al 6040082.

The present invention is directed to a battery wherein the disclosed inventive concept comprises the specific feedthrough assembly and head space insulator.

As to claim 1:

Haas et al disclose a battery or electrochemical cell (TITLE/ ABSTRACT/ COL 1, lines 65-66) comprising a case 20, an electrode assembly 30 and case cover 40 sealing the case (COL 5, lines 26-30). Electrode assembly 30 includes respect tabs 32 (COL 6, line 58-63). The battery also comprises a headspace insulator 70 including a surface area capable of acting as a receiving area (COL 7, lines 7-10 & lines 20-25).

One preferred case cover 60 includes a feedthrough 62 through which feedthrough pin 64 is inserted; the feedthrough pin 64 is conductively insulated from the cover 60 by any suitable material (*either the insulating member or the ferrule*) (COL 7, lines 9-15). It is also disclosed that additional insulation in the form of tubing or a coating around or on the feedthrough pin 64 may also be included to further insure electrical isolation of the feedthrough pin 64 (*either the insulating member or the ferrule*) (COL 7, lines 38-42). *In this case, if the suitable material is considered the insulating member, then the additional insulation may be considered the ferrule, or vice-versa.* Additionally, feedthrough pin 64 is bent to align itself with the desired connector tabs 32 extending from the electrode assembly 30 (COL 7, lines 13-15). *Thus, the feedthrough pin is coupled to an electrode tab.* **Figures 1-2** illustrate the battery embodiment:

FIG.1

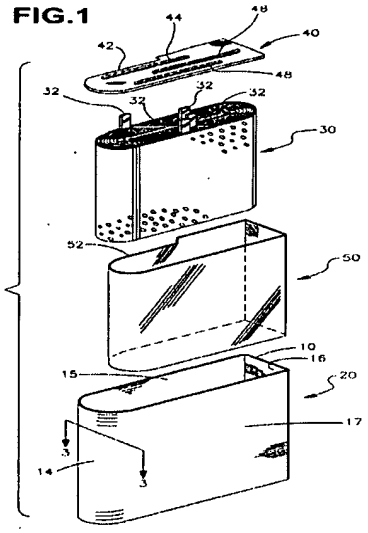
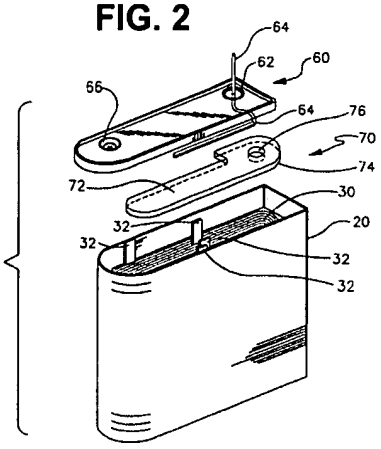


FIG. 2



As to claim 2:

There is a connection between one set of the connector tabs 32 and the case 20 (COL 7, lines 2-6). *This represents the bracket coupled to the battery cover and the electrode tab.*

As to claim 3:

Disclosed is that the headspace insulator 70 is preferably located below the case cover and above the coil insulator 40 (COL 7, lines 20-23). *When these elements are brought together in a mechanical manner so as to assemble the battery, the headspace insulator indirectly couples to, touches or contacts the cover.*

As to claim 4:

Coil insulator 40 includes a notch 42 to accommodate one of the electrode tabs and slits 44, 46 and 48 to accommodate other connector tabs 32 (COL 6, lines 58-63).

As to claim 5:

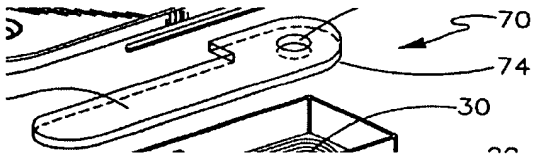
Electrode assembly 30 is also inserted into a case liner 50 (COL 6, lines 64-66).

As to claim 6:

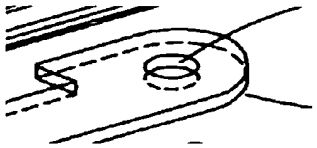
Coil insulator 40 includes a notch 42 to accommodate one of the electrode tabs and slits 44, 46 and 48 to accommodate other connector tabs 32 (COL 6, lines 58-63). Electrode assembly 30 is also inserted into a case liner 50 (COL 6, lines 64-66).

As to claim 7:

Headspace insulator 70 is a solid, generally parallelepiped shaped unit (See cutaway view of thereof below). Cut part and respective opposing side of the headspace insulator 70 is also another side thereof.



Cut part and respective opposing side of the headspace insulator 70 is also another side thereof (See sub-cutaway view thereof below).



As to claim 8:

Headspace insulator 70 includes a raised surface 72 (COL 7, lines 23-25). ***Examiner's note:*** *as to the limitation "adapted to" does not distinguish over prior art because the recitation that an element/feature/member is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform.* ***See MPEP 2111.04***

As to claims 9-11:

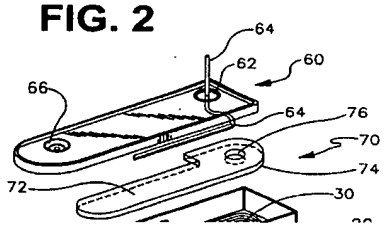
A well 76 is preferably formed in the raised surface 72 where the feedthrough pin 64 is inserted through the headspace insulator 72; and it is preferably adapted to receive the structure surrounding the feedthrough 62 formed in the cover (COL 7, lines 25-35). Well 76 has a curved

(circular) portion (See Figure 2 above). ***Examiner's note:*** *as to the limitation "adapted to" does not distinguish over prior art because the recitation that an element/feature/member is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform.* ***See MPEP 2111.04***

As to claim 12:

It is noted that when these elements are brought together in a mechanical manner so as to assemble the battery, distal end of feedthrough pin 64 will rest on, or touch or contact or be received in headspace insulator 70.

FIG. 2



As to claim 13:

Headspace insulator 70 is provided to electrically insulate the feedthrough pin 64 from the case 20 and the case cover 60 (COL 7, lines 33-37).

As to claim 14:

It is further disclosed that the headspace insulator 70 forms a chamber in connection with the upper surface of the coil insulator 40 that isolates the feedthrough pin 64 and the connector tabs 32 to which is attached (COL 7, lines 35-41). *It is noted that the disclosed chamber can serve as the indentations to lock the distal end into the surface of the headspace insulator 70.* Additionally, lower portion of raised surface 72 meets the requirement of being an indentation (*i.e. an angular surface in an edge, or a recess in a surface per Merriam-Webster's Collegiate*

Dictionary, 10th Edition). Thus, if distal end of feedthrough insulator 70 contacts, touches or rest nearby raised surface 72, such a limitation is met.

As to claim 15:

Battery includes a fill port 66 used to introduce electrolyte solution (COL 7, lines 15-19).

As to claim 16:

There is a connection between one set of the connector tabs 32 and the case 20 (COL 7, lines 2-6). *This represents the bracket coupled to the battery cover and the electrode tab.* Additionally, feedthrough pin 64 is bent to align itself with the desired connector tabs 32 extending from the electrode assembly 30 (COL 7, lines 13-15). *Thus, the feedthrough pin is coupled to an electrode tab. Accordingly, the above connection including a first connector tab 32 with a first polarity is necessarily isolated from the feedthrough pin connected to a second connector tab 32 with a second polarity, otherwise the battery would be short-circuited or non-operational. Since there is a slot (well 76) in the headspace insulator, said slot is necessarily isolated.*

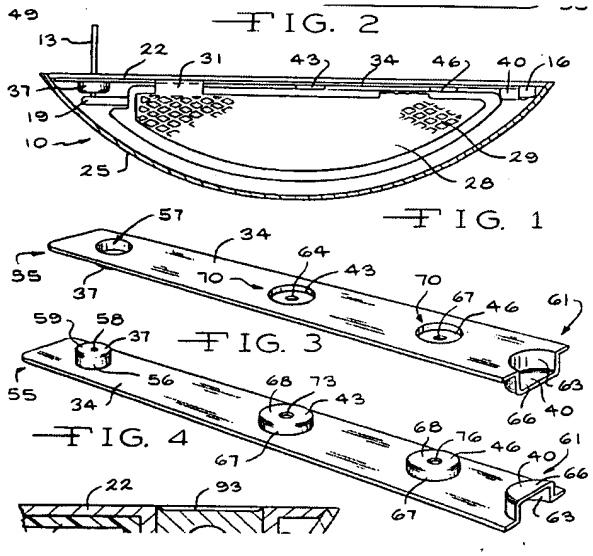
Consequently, the present claims are anticipated.

8. (*At least*) Claims 1-2, 7 and 9-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Probst et al 6224999.

Probst et al disclose an electrochemical cell (ABSTRACT) comprising a battery case 25, lid 22 sealing the battery case 25; respective cathode electrode-connection tab 19 and anode electrode 28-tab connector 31 (*the electrode assembly with tabs*) (COL 3, lines 1-12). It also comprises a header insulator 34 having a first boss 37 comprising a specifically shaped wall

having an open end 57 and further including an opening 58 for receiving the feedthrough pin 13 (COL 3, lines 35-60).

Feedthrough assembly includes the feedthrough pin 13 (COL 3, line 2); terminal ferrule 20 and glass insulator 24 (COL 3, lines 3-8). Feedthrough assembly in the headspace insulator also includes the feedthrough pin 13 (COL 3, line 2); and boss 37 comprising a specifically shaped wall having an open end 57 and further including an opening 58 for receiving the feedthrough pin 13 (COL 3, lines 35-60).



As to claim 2:

The anode electrode 28 has a tab connector 31 that connects to the underside of the lid 22; by connecting the anode electrode to the lid 22, the electrochemical cell 10 is thereby disposed in the case-negative configuration (COL 3, lines 9-17). *This arrangement constitutes the claimed bracket.*

As to claim 7:

Head insulator 34 comprises a solid, generally parallelepiped shaped unit. See feature 34 in the Figures 3-4.

As to claims 9-12 and 14:

Feedthrough assembly in the headspace insulator also includes the feedthrough pin 13 (COL 3, line 2); and boss 37 comprising a specifically shaped wall having an open end 57 and further including an opening 58 for receiving the feedthrough pin 13 (COL 3, lines 35-60). *Thus, the feedthrough pin 13 is held mechanically by the feedthrough receiving configuration of the headspace insulator.*

As to claim 13:

Electrical and thermal insulation properties of the header insulator 34 are necessary to prevent short circuits (COL 3, lines 37-42). *Thus, header insulator 34 isolates the feedthrough pin 13.*

As to claim 15:

Fill ferrule 16 is used to fill the cell 10 with electrolyte (COL 3, lines 28-30). *This is acting as an electrolyte fill port.*

Consequently, the present claims are anticipated.

Response to Arguments

9. Applicant's arguments filed 02/23/07 have been fully considered but they are not persuasive.

10. First of all, applicant did not address the second rejection under Section 102 contending that at least claims 1-2, 7 and 9-15 are anticipated by Probst et al'999 (See item 8 of the office action dated 10/26/06).

11. With respect to the rejection based upon Haas et al, applicant is contending that limitations "*configured to receive and lock into place a distal end of feedthrough pin*" and "*conductive ferrule*" provide patentable distinction over the cited prior art. The examiner largely disagrees with applicant's contention.

12. In the scope of the claimed invention and in the context thereof, the limitation "*configured to receive and lock into place a distal end of feedthrough pin*" is not a clear positive limitation imparting specific structural or functional limitation to the claimed invention. It just requires the ability to so perform. ***MPEP 2111.04*** discusses certain "clauses" raising questions as to the limiting effect of the language in a claim. In this case, the examiner believes that the clause "*configured to*" can be interpreted similar to "*adapted to*" , and in the context of the present invention, the claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed, or by claim language that does not limit a claim to a particular structure. *See Hoffer v. Microsoft Corp., 405 F.3d 1326, 1329, 74 USPQ2d 1481, 1483 (Fed. Cir. 2005) & Minton v. Nat 'l Ass 'n of Securities Dealers, Inc., 336 F.3d 1373, 1381, 67 USPQ2d 1614, 1620 (Fed. Cir. 2003).*

13. Concerning the limitation "*conductive ferrule*", it is to be noted that term "*conductive*" in claim 1 is a relative term not defined by the claim, and the specification does not provide a standard for ascertaining the requisite degree. "Conductivity", as shown in any textbook related to this matter, is a property or characteristic which is quantifiable. Therefore, any article, part, member or material is conductive regardless of the specific degree of conductivity associated therewith. Absent any specific degree of conductivity or construction material in the present claims, it is contended that the insulating member of Haas et al'082 is a member exhibiting a low

degree of conductivity. Unless applicant provides objective or substantiated evidence to demonstrate that the Haas et al's insulating member is at all incapable (100 %) of being electrically or thermally conductive, the present claims are deemed to be anticipated by the cited prior art.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Alejandro whose telephone number is (571) 272-1282. The examiner can normally be reached on Monday-Thursday (8:00 am - 6:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Raymond Alejandro
Primary Examiner
Art Unit 1745

RAYMOND ALEJANDRO
PRIMARY EXAMINER